

**Substitute Specification
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50596/CAB/A400

VIOLA CORNUTA PLANT NAMED 'SUNVIOHO'**BOTANICAL/COMMERCIAL CLASSIFICATION***Viola cornuta*/Viola Plant**VARIETAL DENOMINATION**

5 cv. 'Sunvioho'

BACKGROUND OF THE VARIETY

The genus *Viola* is included in the family *Violaceae* and has about 500 species of annuals, biennials, evergreen, and semi - evergreen and deciduous perennials found in varied habitats in temperate regions worldwide.

10 Each flower has 5 petals: a spurred lower petal, 2 lateral petals and 2 upward-facing upper petals.

While many cultivars within the genus are informally referred to as garden pansies, violas are all derived from the complex hybridization of *V. tricolour*, *V. lutea*, *V. cornuta*, and other species.

15 *Viola cornuta* has played an important role in the development of garden violas and violettas as a result of cross breeding with the garden pansy *V. wittrockiana*.

Viola cornuta is stem prostrate, with leaves narrow to broad ovate, base cordate to truncate, and margin shallow-crenate.

20 The female parent used in the crossing of 'SUNVIOHO' was '9V-39a' (unpatented in the U.S.) which is our breeding line and grown at Omori-cho, Yokaichi-shi, Shiga-ken, Japan

The pollen parent used in the crossing of 'SUNVIOHO' was 'Alpine Sun' (a cultivar unpatented in the U.S.

25 BREEDING PROCESS

Crossing between '9V-39a' as female parent and 'Alpine Sun' as male parent

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was conducted at Omori-cho, Yokaichi-shi, Shiga-ken, Japan in April 2000. In May, seeds were obtained from the crossing and were sown and grown at the same location. In August, three seedlings were selected in view of having highly spreading habit with white petals from 20 seedlings obtained, and propagated by cutting. Those three seedlings were tested by flower potting and bedding from October 2001, at Omori-cho, Yokaichi-shi, Shiga-ken, Japan. Finally one variety was selected in view of having a long blooming time. The botanical characteristics of that plant were then examined, using similar variety 'Violetto Nive' (unpatented in the U.S.) and 'Alpine Summer' (unpatented in the U.S.) for comparison. As a result, it was concluded that this *Viola cornuta* plant is distinguishable from any other variety, whose existence is known to us, and uniform and stable in its characteristics. The new variety of *Viola cornuta* plant was named 'SUNVIOHO'.

Viola cornuta plants, 'Alpine Sun' and '9V-39a', are presently maintained at Omori-cho, Yokaichi-shi, Shiga-ken, Japan.

This new and distinct variety of *Viola cornuta* plant, 'SUNVIOHO', was asexually reproduced by tissue culture at the aforementioned the Omori-cho, Yokaichi-shi, Shiga-ken, Japan and the homogeneity and stability thereof were confirmed.

The new variety reproduces true to type in successive generations of asexual reproduction.

DESCRIPTION

In the following description, the color-coding is in accordance with the Horticultural Colour Chart of The Royal Horticultural Society, London, England (R.H.S. Colour Chart).

The botanical characteristics of the female parent plant '9V-39a' used in the crossing of 'SUNVIOHO' are as follows.

Plant:

Stemmed or non-stemmed - Stemmed

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Growth habit - Spreading

Height - Approximately 9 cm

Plant cover - Approximately 49 cm

Stem:

5 Length - Approximately 36 cm

Branching - Much

Pubescence - Present

Leaf:

10 Overall form - Narrow elliptic

Apex form - Acute

Base form - Acute

Margin - Slightly lobed

Length - Approximately 1.9 cm

Width - Approximately 1.2 cm

15 Color of upper surface - Grayish olive green (Near R.H.S. 137A)

Color of under surface - Moderate yellow green (Near R.H.S. 137C)

Variegation - Absent

Leaf luster - Lustrous

Vein - Distinct

20 Petiole length - Approximately 1.4 cm

Stipule length - Approximately 1.8 cm

Flower:

Peduncle length - Approximately 7.5 cm

Peduncle thickness - Thin

25 Peduncle color - Strong yellow green (Near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.2 cm

Horizontal diameter - Approximately 3.0 cm

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Ruffle of petal margin - Weakly ruffled

Petal curving - Very weak

Petal number - Single

Upper petal

5

Form - Round

Size - Approximately 1.6×1.6 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

10

Side petal

Form - Ovate

Size - Approximately 1.3×1.5 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

15

Blotch - Absent

Lower petal

Form - Cordate

Size - Approximately 1.9×1.9 cm

Petal color - Single-colored

20

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Eye color - Vivid reddish yellow (Near R.H.S. 14A)

Eye size - Medium

Thickness of petal - Medium

25

Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

Seed:

Color - Deep brown

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Physical property:

Flowering time - Late

Fragrance - Faint

Resistance

5 Rain - Strong

Cold - Strong

Heat - Medium

Disease - Strong

Pest - Strong

10 The botanical characteristics of the male parent plant 'Alpine Sun' used in the crossing of 'SUNVIOHO' are as follows.

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

15 Height - Approximately 8 cm

Plant cover - Approximately 35 cm

Stem:

Length - Approximately 25 cm

Branching - Much

20 Pubescence - Present

Leaf:

Overall form - Narrow elliptic

Apex form - Obtuse

Base form - Acute

25 Margin - Serrated or slightly lobed

Length - Approximately 2.1 cm

Width - Approximately 1.0 cm

Color of upper surface - Grayish olive green (Near R.H.S. 137A)

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(Clean copy)****50596/CAB/A400****Color of under surface - Moderate yellow green (Near R.H.S. 137C)****Variegation - Absent****Leaf luster - Matte****Vein - Apparent****5 Petiole length - Approximately 2.2 cm****Stipule length - Approximately 2.1 cm****Flower:****Peduncle length - Approximately 8.0 cm****Peduncle thickness - Thin****10 Peduncle color - Strong yellow green (Near R.H.S. 144B)****Flower form - Vertically oblong****Flowering direction - Upward****Longitudinal diameter - Approximately 3.3 cm****Horizontal diameter - Approximately 2.5 cm****15 Ruffle of petal margin - Flat****Petal curving - Weak****Petal number - Single****Upper petal****Form - Round****20 Size - Approximately 1.1×1.0 cm****Petal color - Single-colored****Ground color - Vivid yellow (Near R.H.S. 9B)****Blotch - Absent****Side petal****25 Form - Ovate****Size - Approximately 1.2×1.0 cm****Petal color - Single-colored****Ground color - Vivid yellow (Near R.H.S. 9B)****Blotch - Absent**

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Lower petal

Form - Cordate

Size - Approximately 1.4×1.3 cm

Petal color - Single-colored

5 Ground color - Vivid yellow (Near R.H.S. 9A)

Blotch - Absent

Eye color - Vivid yellow (Near R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

10 Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

Seed:

Color - Deep brown

15 **Physical property:**

Flowering time - Late

Fragrance - Absent

Resistance

Rain - Medium

20 Cold - Strong

Heat - Medium

Disease - Strong

Pest - Strong

SUMMARY OF THE NEW VARIETY

25 The new variety of viola plant named 'SUNVIOHO', which is a vegetative propagated variety, has a spreading plant habit with very long epigeal stem. The plant height is low and the branching is abundant. The flowers of the new variety are oblong and very small, and the color of flower is pale yellow green with vivid yellow eye. The new variety has a high resistance to cold, pests and diseases.

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BRIEF DESCRIPTION OF THE DRAWING

FIG.1 is a photograph giving a partial view of the new variety of *Viola cornuta* plant 'SUNVIOHO' planted in pots.

FIG.2 is a photograph of flowers of the new variety of *Viola cornuta* plant 'SUNVIOHO'.

DESCRIPTION OF THE VARIETY

The botanical characteristics of this new and distinct variety of *Viola cornuta* plant named 'SUNVIOHO' are as follows.

Plant:

10 Stemmed or non-stemmed - Stemmed
 Growth habit - Spreading
 Height - Approximately 10 cm
 Plant cover - Approximately 90 cm

Stem:

15 Length - Approximately 50 cm
 Branching - Very abundant branching
 Pubescence - Present

Leaf:

20 Overall form - Narrow elliptic
 Apex form - Obtuse
 Base form - Acute
 Margin - Slightly lobed
 Length - Approximately 4.0 cm
 Width - Approximately 2.0 cm
25 Color of upper surface - Grayish olive green (Near R.H.S. 137A)
 Color of under surface - Moderate yellow green (Near R.H.S. 137C)
 Variegation - Absent
 Leaf luster - Matte

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Vein - Apparent

Petiole length - Approximately 4.0 cm

Stipule length - Approximately 1.5 cm

Flower:

5 Peduncle length - Approximately 12 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (Near R.H.S. 144A)

Flower form - Vertically oblong

Flowering direction - Upward

10 Longitudinal diameter - Approximately 3.5 cm

Horizontal diameter - Approximately 2.8 cm

Ruffle of petal margin - Weakly ruffled

Petal curving - Weak

15 Number of petals per flower - Five (two upper petals, two side petals and one lower petal)

Time of flowering - Early November to June in Japan, except for Hokkaido

Lastingness of the individual bloom - Approximately 5-7 days

Upper petal

Form - Round

20 Size - Approximately 1.7×1.7 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Side petal

25 Form - Ovate

Size - Approximately 1.5×1.3 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

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Lower petal

Form - Cordate

Size - Approximately 1.5×1.8 cm

Petal color - Single-colored

5 Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Eye color - Vivid yellow (Near R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

10 Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

Seed:

Color - Deep brown

15 **Reproductive Organs:**

Stamen - Five stamens joined around the ovary. Two lower stamens spurred

Stamen length - Approximately 2.0 mm

Anther color - Near R.H.S. 9D (Yellow Group). Tip: near R.H.S. 166B
(Greyed-orange group)

20 Pollen color - Near R.H.S. 9D (Yellow group)

Pistil length - Approximately 4.5 mm.

Stigma shape - Ellipsoidal

Stigma length - Approximately 1.0 mm

Stigma color - Near R.H.S. 144B (Yellow-green group)

25 Style length - Approximately 1.0 mm

Style color - Near R.H.S. 144D (Yellow-green group).

Ovary color - Near R.H.S. 144C (Yellow-green group)

Physical property:

Flowering time - Early

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Fragrance - Faint or weak

Resistance

Rain - Strong

This variety has survived temperatures of at least -7°C. The plant grows well at temperatures up to 25°C

Disease - Strong

Pest - Strong

This new variety of *Viola cornuta* plant 'SUNVIOHO' is most suitable for flower bedding and potting, hanging basket and ground cover.

10 **COMPARISON WITH SIMILAR VARIETY**

The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Violetto Nive' in following points,

1. The plant width of 'SUNVIOHO' is wider than that of 'Violetto Nive'.
2. 'SUNVIOHO' has narrow elliptic leaf while 'Violetto Nive' has

15 lanceolate one.

3. The leaf color of upper surface of 'SUNVIOHO' is near R.H.S.137A while that of 'Violetto Nive' is near R.H.S.137B.

4. The longitudinal diameter of 'SUNVIOHO' is smaller than that of 'Violetto Nive'.

20 5. The side petal form of 'SUNVIOHO' is ovate while that of 'Violetto Nive' is round.

6. The flowering time of 'SUNVIOHO' is early while that of 'Violetto Nive' is intermediate.

25 The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Alpine Summer' in following points,

1. The plant width of 'SUNVIOHO' is wider than that of 'Alpine Summer'.
2. 'SUNVIOHO' has narrow elliptic leaf while 'Alpine Summer' has lanceolate one.

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3. The flowering direction of 'SUNVIOHO' is upward while that of 'Alpine Summer' is horizontal.

4. The ruffle of petal margin of 'SUNVIOHO' is weakly ruffled while that of 'Alpine Summer' is flat.

5. 'SUNVIOHO' has single-colored flower while 'Alpine Summer' has multi-colored one.

6. The color of the upper petal of 'SUNVIOHO' is near R.H.S. 157A while that of 'Alpine Summer' is near R.H.S. 86B.

7. The color of the side petal of 'SUNVIOHO' is near R.H.S. 157A while that of 'Alpine Summer' is near R.H.S. 9B with near R.H.S 85B margin and near R.H.S. 79A vein.

8. The color of lower petal of 'SUNVIOHO' is R.H.S. near 157A while that of 'Alpine Summer' is R.H.S. near 9B with near R.H.S. 79A vein.

9. The flowering time of 'SUNVIOHO' is early while that of 'Alpine Summer' is intermediate.